MEPS HC-065:
MEPS Panel 5 Longitudinal Weight File

October 2004

Center for Financing, Access and Cost Trends
Agency for Healthcare Research and Quality
540 Gaither Road
Rockville, MD 20850
301-427-1406

Contents

A. Data Use Agreement

Individual identifiers have been removed from the micro-data contained in these files. Nevertheless, under sections 308 (d) and 903 (c) of the Public Health Service Act (42 U.S.C. 242m and 42 U.S.C. 299 a-1), data collected by the Agency for Healthcare Research and Quality (AHRQ) and/or the National Center for Health Statistics (NCHS) may not be used for any purpose other than for the purpose for which they were supplied; any effort to determine the identity of any reported cases is prohibited by law.

Therefore in accordance with the above referenced Federal Statute, it is understood that:

1. No one is to use the data in this data set in any way except for statistical reporting and analysis; and

2. If the identity of any person or establishment should be discovered inadvertently, then (a) no use will be made of this knowledge, (b) the Director Office of Management AHRQ will be advised of this incident, (c) the information that would identify any individual or establishment will be safeguarded or destroyed, as requested by AHRQ, and (d) no one else will be informed of the discovered identity; and

3. No one will attempt to link this data set with individually identifiable records from any data sets other than the Medical Expenditure Panel Survey or the National Health Interview Survey.

By using these data you signify your agreement to comply with the above stated statutorily based requirements with the knowledge that deliberately making a false statement in any matter within the jurisdiction of any department or agency of the Federal Government violates Title 18 part 1 Chapter 47 Section 1001 and is punishable by a fine of up to $10,000 or up to five years in prison.

The Agency for Healthcare Research and Quality requests that users cite AHRQ and the Medical Expenditure Panel Survey as the data source in any publications or research based upon these data.

B. Background

The Medical Expenditure Panel Survey (MEPS) provides nationally representative estimates of health care use, expenditures, sources of payment, and insurance coverage for the U.S. civilian non-institutionalized population. MEPS is cosponsored by the Agency for Healthcare Research and Quality (AHRQ) and the National Center for Health Statistics (NCHS).

MEPS is a family of three surveys. The Household Component (HC) is the core survey and forms the basis for the Medical Provider Component (MPC) and part of the Insurance Component (IC). Together these surveys yield comprehensive data that provide national estimates of the level and distribution of health care use and expenditures, support health services research, and can be used to assess health care policy implications.

MEPS is the third in a series of national probability surveys conducted by AHRQ on the financing and use of medical care in the United States. The National Medical Care Expenditure Survey (NMCES, also known as NMES-1) was conducted in 1977 and the National Medical Expenditure Survey (NMES-2) in 1987. Since 1996, MEPS continues this series with design enhancements and efficiencies that provide a more current data resource to capture the changing dynamics of the health care delivery and insurance system.

The design efficiencies incorporated into MEPS are in accordance with the Department of Health and Human Services (DHHS) Survey Integration Plan of June 1995, which focused on consolidating DHHS surveys, achieving cost efficiencies, reducing respondent burden, and enhancing analytical capacities. To advance these goals, MEPS includes linkage with the National Health Interview Survey (NHIS)—a survey conducted by NCHS from which the sample for the MEPS HC is drawn—and enhanced longitudinal data collection for core survey components. The MEPS HC augments NHIS by selecting a sample of NHIS respondents, collecting additional data on their health care expenditures, and linking these data with additional information collected from the respondents' medical providers, employers, and insurance providers.

1.0 Household Component

The MEPS HC, a nationally representative survey of the U.S. civilian noninstitutionalized population, collects medical expenditure data at both the person and household levels. The HC collects detailed data on demographic characteristics, health conditions, health status, use of medical care services, charges and payments, access to care, satisfaction with care, health insurance coverage, income, and employment.

The HC uses an overlapping panel design in which data are collected through a preliminary contact followed by a series of five rounds of interviews over a 2 ½-year period. Using computer-assisted personal interviewing (CAPI) technology, data on medical expenditures and use for two calendar years are collected from each household. This series of data collection rounds is launched each subsequent year on a new sample of households to provide overlapping panels of survey data and, when combined with other ongoing panels, will provide continuous and current estimates of health care expenditures.

The sampling frame for the MEPS HC is drawn from respondents to NHIS. NHIS provides a nationally representative sample of the U.S. civilian noninstitutionalized population, with oversampling of Hispanics and blacks.

2.0 Medical Provider Component

The MEPS MPC supplements and/or replaces information on medical care events reported in the MEPS HC by contacting medical providers and pharmacies identified by household respondents. The MPC sample includes all home health agencies and pharmacies reported by HC respondents. Office-based physicians, hospitals, and hospital physicians are also included in the MPC but may be subsampled at various rates, depending on burden and resources, in certain years.

Data are collected on medical and financial characteristics of medical and pharmacy events reported by HC respondents. The MPC is conducted through telephone interviews and record abstraction.

3.0 Insurance Component

The MEPS IC collects data on health insurance plans obtained through private and public-sector employers. Data obtained in the IC include the number and types of private insurance plans offered, benefits associated with these plans, premiums, contributions by employers and employees, eligibility requirements, and employer characteristics.

Establishments participating in the MEPS IC are selected through three sampling frames:

- A list of employers or other insurance providers identified by MEPS HC respondents who report having private health insurance at the Round 1 interview
- A Bureau of the Census list frame of private sector business establishments
- The Census of Governments from Bureau of the Census

To provide an integrated picture of health insurance, data collected from the first sampling frame (employers and insurance providers identified by MEPS HC respondents) are linked back to data provided by those respondents. Data from the two Census Bureau sampling frames are used to produce annual national and state estimates of the supply and cost of private health insurance available to American workers and to evaluate policy issues pertaining to health insurance. National estimates of employer contributions to group insurance from the MEPS IC are used in the computation of Gross Domestic Product (GDP) by the Bureau of Economic Analysis.

The MEPS IC is an annual panel survey. Data are collected from the selected organizations through a
prescreening telephone interview, a mailed questionnaire, and a telephone follow-up for nonrespondents.

4.0 Survey Management

MEPS data are collected under the authority of the Public Health Service Act. They are edited and published in accordance with the confidentiality provisions of this act and the Privacy Act. NCHS provides consultation and technical assistance.

As soon as data collection and editing are completed, the MEPS survey data are released to the public in staged releases of summary reports, microdata files and compendiums of tables. Data are released through MEPSnet, an online interactive tool developed to give users the ability to statistically analyze MEPS data in real time. Summary reports and compendiums of tables are released as printed documents and electronic files. Micro-data files are released on electronic files.

Selected printed documents are available through the AHRQ Publications Clearinghouse. Write or call:

AHRQ Publications Clearinghouse
Attn: (publication number)
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Silver Spring, MD 20907
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Be sure to specify the AHRQ number of the document you are requesting.

Additional information on MEPS is available from the MEPS project manager or the MEPS public use data manager at the:

Center for Financing, Access and Cost Trends
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301-427-1406

C. Technical Information

1.0 Data File Contents

This documentation describes a two-year Longitudinal File derived from the respondents to the Medical Expenditure Panel Survey (MEPS) Panel 5 2000 sample. The MEPS, a nationally representative survey of the U.S. civilian non-institutionalized population, uses a panel design in which data were collected through a preliminary contact followed by a series of five rounds of interviews to collect data for a two-year period. The persons on the data set represent those who were in this population for all or part of the 2000–2001 period. To obtain analytic variables, the records on this file must be linked to the 2000 and 2001 MEPS public use data sets by the sample person identifier (DUPERSID).

This file contains a total of 10,406 persons, of whom 10,129 are available for longitudinal analysis over a two-year period. There are 108 respondents who provided data only in 2000 (Panel 5, year 1). These are respondents who participated in the survey in 2000 and died or became ineligible for another reason, such as they entered the military or left the country. There are 169 respondents who provided data only in 2001 (Panel 5, year 2). These are newborns or those who came into a selected household for the first time in 2001, such as persons moving into a sample household from a nursing home or other institution. The sample existing for only one of the two years is provided to facilitate analyses that cover the experience of the U.S. civilian non-institutionalized population over 2000 or 2001.

A weight variable (LONGWTP5), when applied to persons who participated in both 2000 and 2001, enables the user to make national estimates of person-level changes in selected variables (e.g., health insurance, health status, utilization, and expenditures). LONGWTP5 can also be used to develop cross-sectional type estimates for the civilian noninstitutionalized population in one year based only on the Panel 5 sample. These estimates are robust and similar to those constructed using the standard 2000 and 2001 weights (PERWT00F and PERWT01F) included on the MEPS public use files. **NOTE: If the purpose of your analysis is to produce estimates for one year only, it is preferable to use the existing Public Use Files (HC-050 for the 2000 Full-Year Consolidated File and HC-060 for the 2001 Full-Year Consolidated File).** These files have larger sample sizes and will produce estimates with smaller variances.

The estimate of total health care expenditures for 2001 using the longitudinal weight is $696.5 billion, with a standard error of 44.7 billion. Using the 2001 Public Use File (HC060), the estimate of total health care expenditures is $785.9 billion, with a standard error of 20.0 billion. While these estimates are not statistically significantly different, an overall adjustment could be made to improve the alignment across these estimates. To adjust mean or total expenditure estimates derived from the longitudinal file to replicate the overall estimates derived from the 2001 HC060 file within population subgroups (c) or for the overall population, it will be necessary to develop adjustment factors, A(c), which are defined as the ratio of the weighted estimate of health care expenditures derived from HC060 over the weighted health care expenditure estimate obtained from this file for subgroup c. For example, to derive a mean expenditure estimate that is adjusted in this manner for subgroup c (e.g., for age group 65+), use the following method:

$$A(c) = (\Sigma_{i\Sigma c}\ W_{2i}\ Y_i\ ) / (\Sigma_{i\Sigma c}\ W_{1i}\ Y_i\ ), \text{ and}$$

$$= (\Sigma_{i\Sigma c}\, A(c)\, W_{1i}\, Y_i) / (\Sigma_{i\Sigma c}\, W_{1i})$$

where

Y_i is the expenditure variable of interest for individual i,
W_{1i} is the longitudinal weight for individual i,
W_{2i} is the person weight from HC060 for individual i, and
$\Sigma_{i\Sigma c}$ is the sum is across all sample participants in group c.

The following table contains a summary of cases to include, sample sizes, and population estimates (i.e., sum of LONGWTP5) for the three different time periods.

Population of Interest	Cases to Include	Sample Size	Population Estimate
In 2000 and 2001	YRINDP5=1	10,129	279,519,122
In 2000, Not in 2001	YRINDP5=2	108	3,159,469
In 2001, Not in 2000	YRINDP5=3	169	4,728,215

2.0 Variance Estimation

To obtain estimates of variability (such as the standard error of sample estimates or corresponding confidence intervals) for estimates based on MEPS survey data, one needs to take into account the complex sample design of MEPS. The variables needed to implement a Taylor series estimation approach are included on the Longitudinal File. They are VARSTRP5 and VARPSUP5. These variables can be used for producing 2000 or 2001 estimates.